

CHEMIST II

Health Department - Laboratories

PURPOSE: The Chemist II works independently under the supervision of the Chief Molecular Scientist and performs routine analysis for lead in dust wipes, paints, and blood allergen testing for the programs in the Chemistry section. This includes programs such as Childhood Lead Poisoning and Prevention, Environmental Lead Chemistry, Environmental Chemistry, Food and Water Control, Asbestos Control, and Industrial Hygiene. This position will assist in the coordination of quality control and quality assurance efforts of the laboratory to assure compliance with department, state and federal agencies, and good laboratory practice. This includes responsibility for writing SOPs, instrumentation operation and maintenance, data entry in Laboratory Information System (LIS), safety compliance, and other duties as assigned by the supervisor.

ESSENTIAL FUNCTIONS:

Environmental Lead Chemistry Program

- Test household dust wipe samples, paint chips, soil and other material related to lead abatement, for lead content, using Flame Atomic Absorption (AA) spectrophotometry.

Childhood Lead Poisoning Prevention Program

- Analyze whole blood specimens for lead concentrations, using the Graphite Furnace Atomic Absorption spectrometer; measure hematocrit and hemoglobin concentration on whole blood specimens; test household water samples and other miscellaneous samples, such as supplies for the finger puncture procedure, toys, dishes, etc., for lead content.

Allergen Testing Program

- Sample processing and ELISA analysis on processed samples; assist with LIS entry and test result reporting

Environmental Chemistry Program

- Analysis of unknown chemicals and powders using Infra-Red (IR) spectroscopy and microscopy; identify various forms of asbestos in bulk solid samples using polarized light microscopy; count the number of fibers in air samples using phase contrast microscopy; analysis of drinking water, wastewater, organic wastes and other complex matrices and organic pollutants using GC-MS and/or LC-MS; analysis of biological toxins (e.g. Ricin, Botulinum and *Staphylococcus* enterotoxins) using Time-Resolved Fluorescence (TRF) technique.

Food and Water Control Program

- Measure fat content of ground beef specimens; measure salt content in smoked fish samples by ion chromatography; measure conductivity and/or resistivity of laboratory water; measure anion concentrations of water samples for example, fluoride, chloride, nitrate, nitrite, and sulfate, by ion chromatography; measure ammonia, phosphate and turbidity of lake and river waters.

General Duties

- Use appropriate record keeping to indicate quality assurance (QA) and quality control (QC) for all analytical procedures; assist in developing new Chemistry program, and record keeping on each applicable instrument; mastery in use of the Laboratory Information System (LIS); participate in laboratory safety programs; and perform other duties as assigned.

CONDITIONS OF EMPLOYMENT:

- Travel outside the City of Milwaukee, including occasional overnight travel may be required.
- May be required to wear a respirator.
- May be required to participate in a 24-hour on call rotation schedule, including weekends, and carry a pager, cellular phone, blackberry or similar communications device during business hours.
- May be involved in the Chemical Terrorism (CT) Response at Milwaukee Health Department Select Agent Program (SAP), and may require Federal Bureau of Investigation (FBI) background check.

Reasonable accommodations requested by qualified individuals with disabilities will be made in accordance with the Americans with Disabilities Act (ADA) Of 1990.

MINIMUM REQUIREMENTS:

- Bachelor of Science degree in Physical Chemistry, Organic chemistry, Biochemistry or Chemical Engineering from an accredited college or university. *Master's degree is preferred.* (Transcripts must be submitted with Application and Training and Experience Questionnaire).
- After attainment of Bachelor of Science Degree as described above, at least 2 years of environmental chemistry laboratory experience in an academic, public health or commercial setting, performing analytical procedures at a similar level of complexity as those performed by this classification.
Note: Equivalent combination of education and experience may be considered.
- Residency in the City of Milwaukee within 6 months of appointment and throughout employment.
- Valid driver's license at time of appointment and maintained throughout employment.

KNOWLEDGE, SKILLS, ABILITIES, AND OTHER CHARACTERISTICS:

- **Language skills** to read, analyze and interpret business periodicals, professional journals, technical procedures or government regulations; to write reports, business correspondence and procedure manuals; and to effectively present information and respond to questions from groups of managers, clients, customers, and the general public.
- **Mathematical skills** to apply advanced statistical and mathematical concepts such as exponents, logarithms, quadratic equations, and permutations; ability to apply mathematical operations to such tasks as frequency distribution, determination of test reliability and validity, analysis of variance, correlation techniques, sampling theory and factor analysis.
- **Reasoning ability** to solve practical problems and deal with a variety of concrete variables in situations where only a limited standardization exists; to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.
- **Computer skills** to work with MS word-processing, excel spreadsheet and other instrument software applications.
- **Other skills and abilities** to build and maintain good working relationships with a multi-cultural and multi-discipline staff, other agencies, the public, and City of Milwaukee officials; and to maintain confidentiality; demonstrated skill, accuracy and responsibility; interpersonal skills to maintain a positive team environment; willing to participate in cross-training in suitable areas in the laboratory.
- Familiarity and “hands-on” experience using Time-Resolved Fluorescence (TRF) technique, Flame AA, Graphite Furnace AA, GC-MS and LC-MS analysis for environmental and clinical samples is desirable.
- Knowledge in using traditional detectors such as FID, ECD and NPD is desirable.
- Competent in mass spectrum data interpretations is desirable.
- Familiarity with ICP-MS operation and molecular techniques (PCR, nucleic acid sequencing, and sequence alignments using NCBI GenBank BLAST algorithm) is preferred.
- Bilingual ability to assure efficient client communication is preferred.

CURRENT SALARY RANGE (642) is \$43,735 to \$53,034 annually with excellent benefits

THE SELECTION PROCESS will be job related and will consist of one or more of the following: an evaluation of related training, experience and accomplishments; written, or performance tests; interview; or other assessment methods. The Department of Employee Relations and the hiring department reserve the right to call only the most qualified candidates to oral, performance tests or personal interviews. Oral examinations may include written exercises.

THE EXAMINATION will be held as soon as practical after **November 6, 2009**. Receipt of applications may be discontinued at any time after this date without prior notice, however recruitment may continue until the needs of the City have been met. Qualified applicants will be notified by mail of the date, time and location of the examination.

APPLICATION PROCEDURE:

- Applications may be obtained from the Department of Employee Relations, City Hall Room 706, 200 E Wells St, Milwaukee, WI, 53202, by calling 414.286.3751 or by visiting www.milwaukee.gov/jobs
- Applications should be returned to: City of Milwaukee Department of Employee Relations, City Hall Room 706, 200 E Wells St, Milwaukee, WI, 53202

TRANSCRIPTS:

Transcripts should be submitted along with the application. If unavailable at time of application, transcripts should be sent immediately upon receipt to the City of Milwaukee Department of Employee Relations, Attn: Michelle M. Stein, City Hall Room 706, 200 E Wells St, Milwaukee, WI, 53202. (*Student copies are acceptable*).